AMENDMENTS TO THE CLAIMS

1. (currently amended) A method of detecting a resonant frequency, comprising:

a first step of measuring a first amplitude frequency characteristic; ~~and~~

a second step of measuring a second amplitude frequency characteristic,

wherein the first amplitude frequency characteristic is an amplitude frequency characteristic obtained by outputting a loud sound wave of a predetermined measurement signal from a speaker placed in a resonant space and by receiving the loud sound wave in a microphone placed in the resonant space, and

wherein the second amplitude frequency characteristic is an amplitude frequency characteristic obtained by outputting, from the speaker, a loud sound wave of a synthesized signal containing the measurement signal and a signal output from the microphone and by receiving the loud sound wave of the synthesized signal in the microphone, and

detecting ~~wherein the resonant frequency~~ a resonant frequency in the resonant space ~~is detected~~ based on a comparison between the first amplitude frequency characteristic measured in the first step and the second amplitude frequency characteristic measured in the second step.

2. (original) The method of detecting a resonant frequency according to claim 1, wherein a peak frequency at which an amplitude of the second amplitude frequency characteristic is larger than an amplitude of the first amplitude frequency characteristic is detected as the resonant frequency, from a difference between the first amplitude frequency characteristic and the second amplitude frequency characteristic.

3. (previously presented) The method of detecting a resonant frequency according to claim 1, wherein the measurement signal is a sine wave sweep signal.

4. (currently amended) A method of selecting a resonant frequency comprising:

detecting a plurality of resonant frequencies by [[a]] the method of detecting a resonant frequency according to claim 1 ~~any one of claims 1 to 3~~; and

selecting dip center frequencies to be set in a dip filter in decreasing order of amplitude levels in the second amplitude frequency characteristic, from the plurality of detected resonant frequencies.

5. (currently amended) A method of selecting a resonant frequency comprising:

selecting a plurality of resonant frequencies by [[a]] the method of selecting a resonant frequency according to claim 4; and

preferentially selecting, from the plurality of selected resonant frequencies, dip center frequencies to be set in a dip filter in decreasing order of amplitude levels in an amplitude frequency characteristic obtained by subtracting the first amplitude frequency characteristic from the second amplitude frequency characteristic.

6. (currently amended) A device for detecting a resonant frequency comprising:

~~a sound source means;~~

~~a signal synthesization switching means; and~~

~~a measuring means,~~

~~wherein the~~ a sound source means for generating ~~is configured to generate~~ a measurement signal output from a speaker,

~~the~~ a signal synthesization switching means for ~~is capable of~~ receiving, as inputs, the measurement signal from the sound source means and a signal output from ~~the~~ a microphone,

wherein the signal synthesization switching means is capable of switching between a first state in which the signal synthesization switching means outputs the measurement signal and a second state in which the signal synthesization switching means outputs a synthesized signal containing the measurement signal and the signal output from the microphone, and

a ~~the~~ measuring means for ~~is capable of~~ measuring an amplitude frequency characteristic from the signal output from the microphone, ~~and~~

wherein the measuring means is configured to detect ~~the resonant frequency~~ a resonant frequency based on a comparison between a first amplitude frequency characteristic measured in the first state of the signal synthesization switching means and a second amplitude frequency characteristic measured in the second state of the signal synthesization switching means.

7. (original) The device for detecting a resonant frequency according to claim 6, wherein a peak frequency at which an amplitude of the second amplitude frequency characteristic is larger than an amplitude of the first amplitude frequency characteristic is detected as the resonant frequency from a difference between the first amplitude frequency characteristic and the second amplitude frequency characteristic.

8. (previously presented) The device for detecting a resonant frequency according to claim 6, wherein the measurement signal is a sine wave sweep signal.

9. (previously presented) The method of detecting a resonant frequency according to claim 2, wherein the measurement signal is a sine wave sweep signal.

10. (previously presented) The device for detecting a resonant frequency according to claim 7, wherein the measurement signal is a sine wave sweep signal.